

'Deformed' nuclei finding confirms theory

Researchers at Argonne have discovered the first evidence for highly deformed nuclei — squeezed by nuclear and electromagnetic forces into oblong shapes — beyond the "proton drip-line," a condition where nuclei have too many protons to be stable.

Working with the Fragment Mass Analyzer at the Argonne Tandem Linear Accelerator System (ATLAS), Cary Davids (PHY) and an international group of researchers studied nuclei of holmium-141 and europium-131 formed by smashing a beam of lighter nuclei into a target.

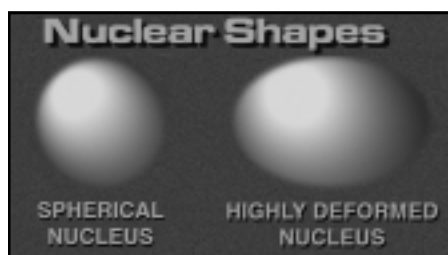
Nuclei are composed of neutrons and protons, collectively called nucleons, and are generally confined to the nucleus by a barrier of electromagnetic and nuclear forces.

A proton that can't find a stable arrangement in the newly created nucleus finds itself trapped behind a wall of nuclear and electromagnetic force. Like any prisoner, the proton wants to escape, and beats itself against the barrier millions of times per second.

Of the millions of nuclei created in the experiments, a few were created in which a single proton had enough energy to flee the nuclear Alcatraz by "tunneling" its way out.

Quantum mechanics, the rules that govern the behavior of subatomic particles, gives them a small but finite chance of disappearing from one location and reappearing in another.

The proton eventually reappears on the outside of the nucleus, as though it had "tunneled" through



NUCLEAR FOOTBALL — The nuclei studied by Cary Davids (PHY) and an international group of researchers are stretched by nuclear and electromagnetic forces into an oblong shape, about 1.5 times greater in length than width. (Illustration at left by Malcolm Tarlton, American Institute of Physics.) Above, Cary Davids holds the $\frac{3}{4}$ -inch square

double-sided silicon strip detector essential to the studies of proton radioactivity at the Fragment Mass Analyzer (background). Photo by George Joch.

the force barrier. This phenomenon is known as proton radioactivity.

Measuring the angular momentum and energy of these escapees can tell physicists about the structure of the nuclei they came from — including their shapes.

In the late 1980s, Russian scientists explained some baffling behavior of protons emitted from radioactive iodine and cesium isotopes by suggesting they were moderately deformed. The Argonne research confirms the Bugrov-Kadmenskii model for the heavier and more strongly deformed nuclei of holmium-141 and europium-131.

With Gammasphere, the new gamma-ray detector now installed at ATLAS, Davids hopes to study the radiation given off by proton-rich nuclei as they form.

Matching the gamma-ray signal to the proton radiation detected at the Fragment Mass Analyzer, another ATLAS instrument, will yield independent confirmation of the Bugrov-Kadmenskii model and give exact measurements of the amount of deformation.

Davids will also search for more proton-emitting nuclei, and hopes to find a nucleus that emits two protons.

Nominations accepted for outstanding service award

Nominations are being accepted for the 1998 University of Chicago Outstanding Service Awards.

The awards were established in 1983 by the Board of Governors to complement the Distinguished Performance Awards. The Outstanding Service Award recognizes employees in support positions whose exemplary service over an extended period has furthered the goals and missions of the laboratory.

An employee may be nominated for a consistent history of innovative ideas, suggestions or inventions; for sustained leadership, reliability and dependability; or for other particularly valuable on-going contributions to the work of the laboratory.

The award consists of an engraved plaque plus \$3,000. It may be given to any full-time Argonne employee in a support position who is not eligible to receive the University of Chicago Distinguished Performance Award, has not received the Outstanding Service Award in the past, and is not a current member of the award committee.

Anyone may make a nomination using the one-page nominating statement available through Human Resources. The format of the nominating form is different from last year. Employees should use the current version.

All nominations should be placed in a sealed envelope marked "Confidential" and sent to: Outstanding Service Award Committee, Attention: Leslie Osborne, Human Resources, Building 201, Argonne-East, with an information copy sent to the nominee's division director or department head.

Deadline for nominations is Friday, April 17. For more information, call Human Resources at ext. 2-2939.

Spring brings start of severe weather season

The Chicago area may have had a relatively mild winter (the recent snowstorm notwithstanding), but even in an El Niño year, spring brings the likelihood of severe weather.

Argonne-East employees should review tornado shelter information posted on all bulletin boards and be prepared to take cover if a warning is sounded.

A tornado *watch* means conditions are right for tornadoes to form. An alert tone is sounded on the site-wide address system, followed by an announcement.

A tornado *warning* means a twister has been sighted in the area or detected by radar. Outdoor sirens will sound, and a sitewide announcement will direct employees to head immediately for design-

nated tornado shelter areas. Warnings can occur even if a tornado watch hasn't been issued.

When the warning tone sounds from the public-address system at either Argonne site, employees can increase their odds of surviving a strike by following these guidelines:

■ Stay away from windows. A tornado can transform a window

(Continued on page 2)

Inside this issue ■ Lab hosts ride and drive ■ FBI will train on Argonne-East site ■ Argonne on the Silver Screen

Alternative fuel vehicles get a test drive

Take that taxi for a spin! Or, maybe that delivery truck is more your style. Take it for a ride.

Visiting fleet managers and Argonne employees had those choices and more at the March 25 "Ride and Drive" in Argonne-East's 360 area.

At lunchtime, participants in the day-long Clean Cities Alternative Fuel Forum got a first-hand look under the hoods of cars, trucks, minivans and even a taxi powered by such alternative fuels as ethanol, methanol, propane and compressed natural gas, and a chance to test drive them around Argonne. Argonne employees stopped by as well.

The vehicles – ranging from a Dodge Intrepid to a Ford delivery truck – belong to corporate fleets and are in use daily.

Co-sponsors of the forum – Argonne, the U.S. Department of Energy, NiCor Gas and the Peoples Gas Light and Coke Company – provided many of the vehicles and shared their experiences.

Fleet managers, operators and environmental administrators attended the forum to learn about state regulations that go into effect in model year 1999. The regulations require Chicago-area fleets of 10 or more vehicles to acquire vehicles that meet the Environmental Protection



TEST DRIVE - Above, John Freking of General Motors explains some of the alternative fuel vehicle features to Joseph Lopez and Ben Santore, who work both work for the Village of Woodridge. At right, those who came to the Ride and Drive got to peek under the hood of this taxi.

Photos by George Joch



Agency's low-emission certification when replacing fleet vehicles.

"Chicago does not meet the EPA's air quality standards," said Regional Clean Cities program manager Melinda Latimer.

Clean Cities is a DOE program that organizes cities, states,

fuel providers and fleets to get alternative fuel fleets on the road and to build the infrastructure to support them.

"Driving these low-emission, alternative-fuel vehicles reduces air pollution," Latimer said.

Symposium aimed at cooperation between U.S., Korea

The 1998 Korea-U.S. Science and Technology Symposium will be held April 23-25 in Chicago. Computing and Telecommunications will be the focus of the conference. More than 250 corporate, university and federal researchers are expected to participate.

"The Korean-American Scientists and Engineers Association (KSEA) is organizing the conference to promote the sharing of common interests, the exchange of information, and the identification of opportunities for potential research and business cooperation," said KSEA president Kyong Chul Chun (EAD).

For more information on the symposium, contact Chun at ext. 2-5385.

Employees can access lab photos, posters on the web

Laboratory employees can now access a collection of posters, photographs, viewgraphs and fact sheets covering many areas of Argonne research via the World Wide Web.

Available for employee use only, this "Partners in Innovation" Web site indexes and displays approximately 200 communications products that have been used by Argonne scientists at conferences and technical meetings.

The research areas currently represented are environmental remediation, transportation technology, alternative fuels, energy systems, industrial processes and materials science.

All materials now in the collection are available and could be adapted for other communication needs. The collection resides at <http://www.ipd.anl.gov/partners> and can also be accessed from Argonne's Web site (click on "Doing Business with Argonne"; from the Industrial Technology Development Center homepage, click on "Internal Information").

This searchable collection—designed and maintained by the Information and Publishing Division (IPD)—was developed with the Industrial Partnerships Committee.

For more information, call Renee Nault (IPD) at ext. 2-6064.

Be prepared for tornadoes, severe storms

(Continued from page 1)

into jagged shrapnel moving at more than 100 miles per hour. Windows do not need to be opened to prevent a building from "exploding."

■ Know the closest tornado shelter area — and when a warning sounds, go there immediately. Wait for the all-clear.

■ Those who work in trailers should seek shelter in a stronger structure. Check with an area emergency supervisor for details.

■ Employees using hazardous materials may be required to secure those substances for the duration of a tornado watch. Those working with sensitive or classified materials should secure them.

Studies of tornado damage have

shown that the southwest corner is actually the least protected area of an above-ground structure. Basements are always the best bet. If there is no basement, head for an interior hallway — away from windows — and stay low. Getting under a stairwell, heavy table or workbench will add protection.

If caught outside, try to move away from the tornado at a right angle — for example, if the twister appears to be heading east, move south. If this doesn't work, try to find a ditch, culvert or other low area and cover your head.

Drivers should not try to outrun a twister — the storms can move at 60 miles per hour or faster and don't have to follow the road or slow

for traffic. Leave the car and try to find shelter.

Cafeteria shelters

If a tornado warning is issued during lunch hours, a public address system will inform those in Argonne-East's Building 213 Cafeteria. Marriott employees will direct cafeteria patrons to shelter areas.

The cafeteria's tornado shelter areas are:

- Basement locker rooms
- Dock area stairwell
- Kitchen area (not the serving area)
- Supply and storage rooms on the southeast corner of the building
- Bathrooms near the entrance.



Argonne News is published weekly for Argonne employees by the Office of Public Affairs. Send news items to Editor Dave Jacqu , Building 201, Room 2Q-02 (OPA-201). Voice: ext. 2-5582. Fax: ext. 2-5274. E-mail: info@anl.gov. Argonne-West correspondent: Dolores Lagerquist, Bldg. 752, ext. 3-7523. Deadline for all materials is 5 p.m. Monday. Argonne National Laboratory is operated by the University of Chicago for the U.S. Department of Energy. Vol. 51, No. 13.

Send your news tips and comments to:
info@anl.gov

Seminars

Send seminar listings to Evie Fagan, Building 201, Room 2U-09 (OPA-201). Deadline is 5 p.m. Monday. Seminar listings *only* can be sent by e-mail to efagan@anl.gov. *Note new e-mail address.*

ARGONNE-WEST

Thursday, April 9

Engineering Division Seminar: **“Development and Testing of Ternary Carbides and Carbonitride Uranium Fuels for Space and Terrest”** by Samin Anghaie, Professor, Nuclear & Radiological Engineering, University of Florida, Gainesville. 8:30 a.m., Lab & Office Bldg. Conference Room.

ARGONNE-EAST

Monday, April 6

Materials Science Division Seminar: **“Biomedical Applications of Ferroelectric MEMS”** by Dennis L. Polla, Microtechnology Laboratory, Minneapolis, Minn. 11 a.m., Bldg. 212, Conference Room A157.

Joint Chemistry and Materials Science Divisions Seminar: **“Chemical Vapor Deposition of Diamond”** by Stephen J. Harris, Physics and Physical Chemistry Department, General Motors R&D Center, Warren, Mich. 1:30 p.m., Bldg. 200, Conference Room J183.

High Energy Physics Division Theoretical Physics Seminar: **“Neutrinos from Atmospheric Charm”** by Mary Hall Reno, University of Iowa, Iowa City. 2 p.m., Bldg. 362, Conference Room E188.

Physics Division Seminar: **“First Observation of Spin Disalignment in Heavy-Ion Collisions: $^{28}\text{Si} + ^{28}\text{Si}$ on the Resonance Energy 111.6 MeV”** by Rachid Nouicer, University of Illinois, Chicago. 3:30 p.m., Bldg. 203, Conference Room R150.

Tuesday, April 7

Chemical Technology Division Seminar: **“Lewis and Brønsted Acidity in Dealuminated Zeolites: A Solid-State NMR Study”** by Alexander Blumenfeld, Senior Scientist, University of Wisconsin, Milwaukee. 10:30 a.m., Bldg. 205, Y-Wing Auditorium.

Energy Technology Division Seminar: **“Diamond Surfaces, Structures, and Devices with Negative Electron Affinity: Can Electrons Just ‘Roll Out’ of Them?”** by Peter Baumann, (MSD) & North Carolina State University, Raleigh, N.C. 10:30 a.m., Bldg. 212, Conference Room A157.

Physics Division Theoretical Physics Seminar: **“Properties and Decay of Heaviest Atomic Nuclei”** by Robert Smolanczuk, Soltan Institute for Nuclear Studies, Warsaw, Poland, 3 p.m., Bldg. 203, Conference Room B221.

Wednesday, April 8

Materials Science Division Seminar: **“Powder Diffraction of Neutrons in Defected Materials”** by S. K. Chan, (MSD). 11 a.m., Bldg. 212, Conference Room A157.

High Energy Physics Division Seminar: **“Roles for Plasmas in Accelerator Technology and Applications”** by Chris Clayton, University of California, Los Angeles. 3:30 p.m., Bldg. 362, Conference Room F108.

Thursday, April 9

Chemistry Division Monday Morning Seminar Series: **“Towards the Rational Design of Synthetic Light-Harvesting Arrays”** by Jon Lindsey, North Carolina State University, Raleigh. 11 a.m., Bldg. 200 Auditorium.

Chemical Technology Division Lecture Series: **“Pyrochemistry Applied to Nuclear Materials - Lecture 2”** by Irv Johnson, (CMT). The second lecture uses the basics of Lecture 1 to describe partitioning between molten salts and liquid metals, formation of solid phases in liquid metal solutions and reduction of oxides. 10:30 a.m., Bldg. 205 Auditorium.

Materials Science Division Seminar: **“Ferroelectric Thin Films of PbTiO_3 Directly on Silicon: Exciting New Developments”** by Vijayanti Raghunath Palkar, Tata Institute of Fundamental Research, Bombay, India. 11 a.m., Bldg. 223, Conference Room S105.

Friday, April 10

Physics Division Colloquium: **“The TESLA Collaboration: A Major Effort on Superconducting RF Development”** by Don Edwards, DESY, Hamburg, Germany and Fermilab, Batavia, Ill. 11 a.m., Bldg. 203 Auditorium.

Additional seminars appear on the Argonne News World Wide Web site:
<http://www.anl.gov/news.html>

FBI to train at ANL-East

The FBI will conduct a large scale exercise at the Argonne-East site during the week of April 6. While some activity will be apparent, there will be little or no disruption of laboratory operations.

Most activities will be conducted in the 800 area on the west side of the laboratory and Building 320 on the south side of the lab. The command center for the exercise will be in the gallery of Building 402.

Employees are asked not to enter the exercise areas, which will be clearly marked.

For more information, call Ed Mickulas (SEC) at ext. 2-5754.

CUG announces monthly agenda

The Argonne Computer Users Group (CUG) will meet Tuesday, April 7, at 3 p.m. in Argonne-East's Building 221, Room A216.

This month's agenda includes:

■“Preliminary Results of OSE Review,” by Paul Krystosek (ECT)

■“Administrative Computing Overview,” by Bob Hischer (ECT)

■“Network Based MS-Office Experiences,” by Robert Raffenetti (ECT)

■“Consulting/Customer Service Integration,” by Mike Vonder Heide (ECT)

■“Status of laboratory 1-800 Service,” by R. McMahon

The CUG usually meets on the first Tuesday of each month at 3 p.m. in Argonne-East's Building 221, Room A216. Meetings are open to all interested Argonne and DOE employees.

Lab appears on silver screen again

The movie “Mercury Rising,” which had a small scene shot at the Argonne-East site, opens at theaters Friday, April 3.

Crews spent two days last summer filming at the East Gate and the Advanced Photon Source access tunnel. These sites “played” the entrance to the National Security Agency.

The movie stars Bruce Willis as an FBI agent protecting an autistic child who has inadvertently deciphered a top-secret military code. The film also stars Alec Baldwin as National Security Agency official Lt. Nicholas Kudrow.

“Mercury Rising” was directed by Harold Becker whose other films include “The Onion Field,” “Taps,” “Sea of Love,” “Malice” and “City Hall.”

Classified Ads

MISCELLANEOUS

TICKETS — Darien Woman's Club Housewalk, April 26, noon to 5:30 p.m., visit the tea room afterwards. \$15. Evie Fagan, (630) 960-5563.

MISCELLANEOUS — 2, silver pendants on silver necklace. \$45. German, 20 mark gold coin, 1902. \$110. Blue rhinestone necklace, bracelet & earring set. \$40. Martha Teitlus, (708) 233-2654.

MISCELLANEOUS — 2, oak chairs w/leather seats, early 1900s. \$50/each. 4, oak chairs, painted, need stripping. \$20/each. Antique table lamps. \$75/each. Estelle Blickhahn, (630) 257-7818.

TWIN BED — Mattress, box spring & frame, good condition. \$50. Eric Parks, (630) 325-3541.

RADAR DETECTOR — Uniden R-7, pocket size, in box w/ booklet, good condition, works off cigarette lighter port. \$25. Sherman Smith, (708) 343-0122.

BEANIE BABIES — Peanut the Elephant, Waddle the Penguin & Goldie the Gold Fish. Jill Jonkouski, (773) 586-1664.

MOVING SALE — Bed, Serta, queen size mattress w/box spring, 3-months old, mint condition. New \$340 - asking \$240 o.b.o. Haibo Zhang, (815) 730-1052.

COMPUTER — 386/33 Mini-Tower, 4 MB RAM, 130 MB HD, 1M SVGA card, 14" SVGA monitor, all working parts. \$300 o.b.o. Maria Addison, (815) 436-6975.

MISCELLANEOUS — Broadmoor Simplicity 717, riding lawn tractor, 36" cutting deck, new engine in '95, needs battery. \$350. Sears, 2-speed auto humidifier. \$25. Couch. \$100. Laurie Scheiblein, (815) 838-2706.

BICYCLES — Several men's and women's bicycles, some are 3-speed, old style & some are 10-speed, some are wide tires & some are thin tires. \$60 - \$200. Sandra Tollaksen, (630) 897-2339.

DIRT BIKE — Honda '72, XL75, needs head. \$100. Linda DeVito, (708) 349-1807.

POOL — 18' x 4', Esther Williams pool, solar reel, dual filter, new liner in box, full assembly instructions, some games need retaining ring. \$1000. Barbara Burke, (815) 458-2399.

MISCELLANEOUS — Personal Water, 94 Polaris SL750, trailer, spare cover, mint condition, low hours. \$3,900. Rod Habbe, (815) 838-3444.

LAWN TRACTOR — 12 HP riding lawn tractor, 38" mowing deck, 7-speed, good condition. \$395. Roxanne Puricker, (815) 469-3658.

LAWN TRACTOR — John Deere III lawn tractor, 11 HP, 38" deck, bagger. \$600 o.b.o. Garrett Rinehart, (630) 554-9089.

BICYCLES — Ladies, 26" Schwinn, 10-speed. \$60. Adult stationary Schwinn exercise. \$40. Men's, 24" Huffy, 12-speed. \$50. Huffy, 20" dirt bike. \$30. Boy's, Huffy, 14" bike. \$20. William Keenan, (630) 257-5334.

MISCELLANEOUS — Kitchen table w/8 chairs. 2, living room end tables, leather inlays, 5-light chandelier light fixture, solid brass table lamp, brass headboard, double bed size, twin wooden head board, 19" color TV, brass head board, double bed size. No reasonable offer refused. William Keenan, (630) 257-5334.

TAPING — 4' x 8' sheet or 4' x 12' sheet. \$11/each. Tony Rodriguez, (815) 886-0793.

COMPUTER — Mini Tower, Intel 166, MHz pentium processor w/MMX technology, PCI

Classified ad request forms are available in stockrooms, at the Office of Public Affairs in Building 201, and at Argonne-West's Building 752, Room D109. The old half-sheet forms are acceptable, but note that the deadline is incorrect. Deadline for classified ads is **5 p.m. Monday**.

Please note: All classified ads appear on Argonne's World Wide Web site and can be seen by the public.

Requests can be submitted by fax to ext. 2-5274, or by inter-office mail to Evie Fagan, Building 201, Room 2U-09 (OPA-201). A drop-off box is located at the *Argonne News* office, Building 201, room 2Q-02 and at 2U-09.

Request forms must be signed and must include a home phone number. Ads cannot be accepted by phone or electronic mail. Please limit ads to 25 words; longer ads may be edited. Housing listed for sale or rent is available without regard to race, creed, color or national origin.

Argonne-West employees are welcome to submit classified ads to *Argonne News*. Request forms are available at the office of Argonne-West Correspondent Dolores Lagerquist, Building 752, Room D109. When completed, fax the request form to the *Argonne News* office at (630) 252-5274.

motherboard, 2.6 gig Seagate hard drive, 64 meg RAM, Diamond stealth video w/4meg VRAM, USR Sportster 33.6 modem, 3.5, 5.25, 4X-CD Rom drives, Sound Blaster audio w/speakers, McAfee virus scan, Win95, Office 97 Pro, MS Money 98 financial suite, Street Atlas USA 5.0. \$900. Keith Johnson, (773) 247-5147.

SAILBOAT — 24' C&C sailboat, includes trailer, dinghy & 2 motors. Call for list of all equipment included. Lee Harris, (815) 723-5904.

COMPUTER — Macintosh SE computer w/external 30MB hard drive, HP deskwriter & software programs including Print Shop, Algeblaster & many more. Connie Markiewicz, (630) 257-5899.

MISCELLANEOUS — Weslo, manual treadmill. \$75. 3-piece sofa, great condition. \$100. Maria Pacholok, (630) 852-6629.

AUTOMOBILES

1993 CHEVROLET — S-10 Blazer, 4 x 4, 4-door, 75K miles, burgundy w/charcoal interior, fully loaded, alarm, one owner, excellent condition. \$11,400. James Gotchie, (630) 553-9505.

1985 HORSE/CAMPING TRAILER — Lazy 'N', deluxe self-contained trailer, gooseneck, 2/3 horse straight in, 17' living area, tack room, 34' over all, new awning, 3-way refrigerator/freezer, clean, stored inside. \$12,900. Marion L. Kopriva, (630) 325-0512.

1987 CHEVROLET — Astro van, 81K miles, new tires, battery & rear brakes. \$2,100 o.b.o. Jay Goatley, (815) 439-1709.

1985 RECREATIONAL TRAILER — Real Lite recreational trailer w/awning, AC, refrigerator w/freezer, stove w/over, heater, hot water. .75 bath, 1-year old battery, sleeps 6. \$3,000. Barbara Burke, (815) 458-2399.

1988 HYUNDAI — Excel, white, 4-door, 5-speed, manual transmission, 100K miles. \$500 o.b.o. Dee Anna Weyer, (708) 422-3652.

1989 VOLVO — 740 GL, 57.7K miles, 5-speed, AC, PW, PL, leather interior, AM/FM stereo cassette, sunroof, heated seats, new tires. \$8,200. Joseph Berkowitz, (630) 325-7397.

1997 JEEP — Cherokee Laredo, 4 x 4, 12K miles. \$22,000 o.b.o. George Lawhorn, (815) 838-7217.

1988 VOLKSWAGEN — Cabriolet, red w/white top, AT, AC, AM/FM stereo, mechanically sound, 114K miles. \$2,500. Dave Hill (630) 553-9044.

1992 NISSAN — Sentra XE, 4-door, AT, cruise, tilt, AM/FM cassette, 130 K miles, one owner, runs excellent, some body damage. Blue book trade-in \$1,900 - asking \$1,500. Heidi Vece, (815) 726-4316.

1984 CHEVROLET — Caprice, 4-door, 305, AT, good working car, dependable. \$700 o.b.o. Tad Budraitis Jr., (708) 385-5269.

1990 FORD — Escort, 2-door hatchback, AC, AT, PS, AM/FM cassette, 87K miles, excellent condition. \$1,600. Vandana Nanal, (630) 663-0271.

1989 FORD — F150 pick-up truck, 305, AT, no rust, runs good, bed liner, trailer hitch, 112K miles. \$4,900 o.b.o. Ron Fierro, (815) 476-6445.

1985 PONTIAC — Firebird, Limited Edition 500, V 6, low miles, runs good, looks good, white w/red interior. \$3,200 o.b.o. Donna Pecina, (630) 972-0809.

1994 EAGLE — Vision, 4-door, AC, PS, all power, ABS, infinity stereo/CD changer, leather, loaded, traction control, 80K miles. \$11,000. Shiu-Wing Tam, (630) 852-3427.

1993 MITSUBISHI — Diamante, wagon, V6, 60K miles, loaded, excellent condition. \$10,400. Chris Bischof, (630) 515-9413 or c_bischoff@acm.org

HOUSING

LOT/SALE — Lake of the Ozarks. \$17,500. Todd Trotter, (630) 261-9750.

TIMESHARE/SALE — Austria. \$6,500 & exchangeable. Todd Trotter, (630) 261-9750.

VACATION/RENT — Tucson, Ariz., 1 bedroom condo, 2 pools, spa, golf nearby, fully furnished, convenient location. \$350/week or \$1,200/month. Dan Omiecinski, (708) 636-7456.

CONDO/SALE — Timber Oaks Subdivision, Port Richey, Fla., must be 55 years of age, 2 bedrooms, 2 baths, large front room, large dining room, new refrigerator, new carpeting throughout, new linoleum tile in kitchen & hall, vertical blinds, washer/dryer, cable, golf course view from screened in porch, no pets, children allowed for 2 weeks only, newly decorated club house, man made lake for fishing, picnic area, golf course \$45,900. Marion Janicki, (813) 863-1192.

HOME/SALE — New Lenox, custom tri-level, 3 years old, 3 bedrooms, 2 baths, cathedral ceiling, large family room w/fireplace, dining room, huge lot w/trees. \$173,900. Jim Oprzedek, (815) 485-8988.

APARTMENT/RENT — Furnished, close to

ANL & Lemont train station, heat. water & air conditioning included, special rate for ANL employees, short term lease available. Andrew Drabik, (630) 257-5546.

HOUSE/SALE — Ranch, steel siding/cedar exterior, large yard, many updates, 3 bedrooms, 1.5 baths, utility room, CAC, gas heat, 2.75-car detached garage, appliances stay, 15 minutes from lab., Homer Township. \$128,000. Laurie Scheiblein, (815) 838-2706.

CONDO/RENT — 1 bedroom, 1 bath, on Gulf of Mexico beach, Sundial Resort, Sanibel Island, Fla., fully equipped, breathtaking view of Gulf from screened lanai, weeks available starting 7-11-98. Susan Webster, (630) 963-9604 or <http://www.sundialb407.com>.

APARTMENT/RENT 1 bedroom, Crest Hill, nice neighborhood, heat, gas & water included, available from April 20, '98. \$430/month. Haibo Zhang, (815) 730-1052.

HOUSE/SALE — Flossmoor, 4 bedrooms, 2,400 sq. ft., large master bedroom w/floor to ceiling windows, large finished basement. \$184,000. Harvey Rarback, (708) 957-4055.

HOUSE/SALE — Brand new, 2 story, 4 bedrooms, 2.5 baths, full basement, CA, LR, DR, FR w/fireplace, hardwood floors, 12' x 20' deck, 2.5-car garage, landscaped, 5 minutes from lab. \$229,000. Kathy Vanoskey, (815) 730-9337.

HOUSE/SALE — Homer Township, 3 bedrooms, split level, 1.5 baths, DR, FR, large laundry, hobby of office space on walk out lower level, patio & deck, detached & heated 2.5 car garage, .5 acre wooded lot, quiet street, great place for kids, 10 minutes from lab. \$167,000. Dawn Ferrazzi, (815) 838-4323.

HOUSE/SALE — 1 owner ranch on one acre, 2 miles from lab., 3/4 bedrooms, 2 baths, fireplace, rough sawn cedar, finished basement newly carpeted, wet bar, laundry room, workshop, 4 bedroom/office, yard lined w/evergreens, mature trees, shed, 2.5-car garage. \$219,000. Marian Harkins, (630) 739-7245.

HOUSE/SALE — Bolingbrook, 3 bedrooms, hardwood floors, 9' ceilings, library w/built-in bookcase & computer center, extensive landscaping, 15 minutes to lab. \$193,900. Mark Petri, (630) 759-2670.

WANTED

TRUCK COVER — To fit '90, full size Ford super cab. Marion Kopriva, (630) 325-0512.

HOUSE/APARTMENT — 4, clean, responsible student interns, from May - August, references gladly provided, 3 bedrooms. Lilac Berniker, (630) 252-6962.

SLOT CARS — 60s slot cars, Hot Wheels Redlines. Janice Sejut, (630) 963-2351.

Deadlines

News items, seminar listings and classified ads must be received at the Argonne News office by 5 p.m. Monday for the issue of the following Monday.

✉ Editor: Dave Jacque
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Classified ad dropoffs are at
Building 201, Rooms 2U-09 and 2Q-02